

NOT FOR PUBLIC RELEASE

PRELIMINARY EXAMINATION

OF

CHANNEL FROM
BUZZARDS BAY TO
BUTTERMILK BAY

MASSACHUSETTS

6820

THE BOARD OF ENGINEERS FOR
THE STATE OF MASSACHUSETTS
AUG 29 1945

1827 (Buzzards Bay to
Buttermilk Bay, Mass.)
#2 of 11 Copies

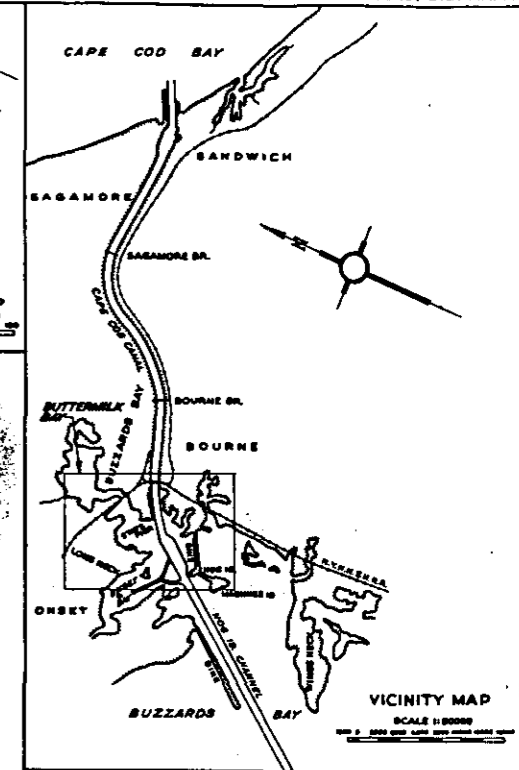
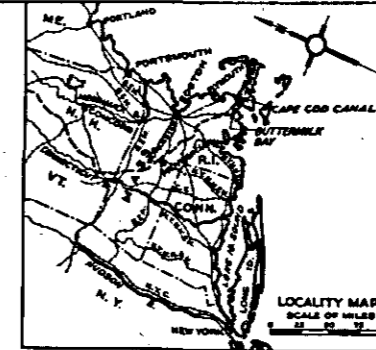
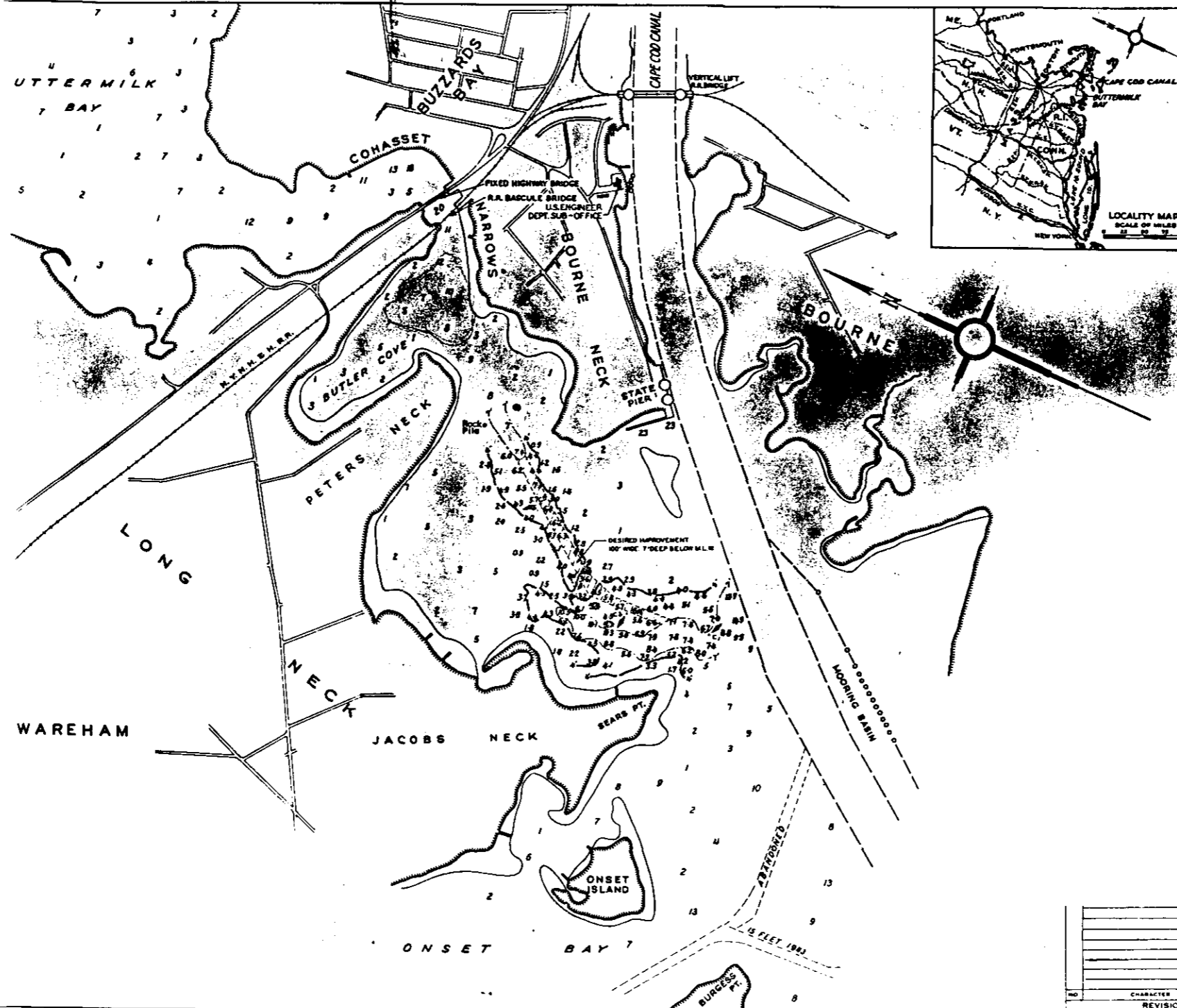


AUTHORITY- THIS REPORT IS
SUBMITTED IN COMPLIANCE
WITH SECTION 6 OF THE
RIVER AND HARBOR ACT
APPROVED 2 MARCH 1945

U. S. ENGINEER OFFICE
BOSTON, MASS.
4 AUG. 1945

COPY NO. 7

Returned for Disposition by O.C. 3 July 1950.
Copies 6 & 7 Retained.
Copies 9-10-11-13-14-15 Destroyed.



LEGEND

- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- 4-FT. CURVE OF DEPTH
- 7-FT. CURVE OF DEPTH

NOTE: DEPTHS EXPRESSED IN FEET AND TENTHS ARE TAKEN FROM LATEST SURVEYS OF AREAS IN WHICH THEY APPEAR. ALL OTHER DEPTHS ARE TAKEN FROM AN ENLARGEMENT OF U.S.C. & G.S. CHART NO. 231. DEPTHS ARE REFERRED TO THE PLANE OF MEAN LOW WATER AS INDICATED BY THE BENCH MARK. BENCH MARK: A COPPER BOLT IN THE CONCRETE ON THE WEST END OF THE NORTH PLATFORM OF THE STATE PIER. ELEVATION 11.70 FEET ABOVE MEAN LOW WATER. SOUNDINGS SHOWN IN FEET AND TENTHS WERE TAKEN MAY, JULY, 1943.

BUZZARDS BAY, MASS.
CHANNEL TO
UTTERMILK BAY

U.S. ENGINEER OFFICE, BOSTON, MASS.		22 JUNE 1945
APPROVAL	RECOMMENDED	APPROVED
SUBMITTED		TO ACCOMPANY REPORT
DATE		DATED 4 AUGUST 1945
FILE NO 1053 DR. 72		



WAR DEPARTMENT
UNITED STATES ENGINEER OFFICE
THIRD FLOOR, PARK SQUARE BUILDING
31 ST. JAMES AVENUE
BOSTON 16, MASS.



MEMO

27 August 1915

Aug 29 9 09 AM '15

U.S. ENGINEER
RECEIVED
1000

Subject: Estimate - Channel from Buzzard's Bay to Bittern's Bay, Mass.
To: The Chief of Engineers, Washington, D.C., through the Division Engineer, New England Division, Boston 16, Massachusetts.

1. There was submitted on August 1, 1915 an unfavorable preliminary examination report on a channel from Buzzard's Bay to Bittern's Bay, Mass. to determine the improvement desired by the local interests and if a survey and further investigation were warranted.

2. The estimate given below indicates the approximate cost of dredging a channel to a depth of 7 feet at mean low water and a width of 100 feet through the bar above Sears Point. The quantity is based on place measurement with an allowance of 1 foot for overdepth dredging. The unit price includes engineering and contingencies.

Dredging the channel 25,500 cu. yds. @ .50 11,750

3. To make a hydrographic survey of the channel area would require a week and the survey and report would cost about \$1000.

4. There is inclosed in triplicate map entitled "Buzzard's Bay, Mass., Channel to Bittern's Bay," File No. 1053 Dr. 72.

[Signature]
J. P. HUNT
Colonel, Corps of Engineers
District Engineer

Inclosure:
Lap, File No. 1053 Dr. 72 (in trip.)

Buzzard's Bay Inlet - File 1053 Dr. 72.

SUBJECT: Estimate - Channel from Buzzards Bay to Buttermilk Bay, Mass.

HEDGW
(27 Aug 45)

1st Ind.

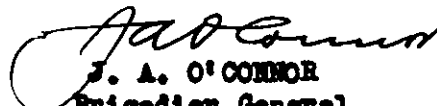
CAT/phw

Division Engineer, New England Division, Boston 10, Mass., 29 August 1945

TO: The Chief of Engineers, U. S. Army, Washington 25, D. C.
ATTENTION: SPENR

1. Forwarded in accordance with paragraph 279.4, Orders and Regulations.

2. The unfavorable preliminary examination report referred to in paragraph 1 of basic letter was concurred in by this office and forwarded to the Office, Chief of Engineers, by 1st Indorsement under date of 21 August 1945.


J. A. O'CONNOR
Brigadier General
Division Engineer

✓
1 Incl: n/c
(1 cy w/d)

10/1/45

cc: Boston D.O.



WAR DEPARTMENT
UNITED STATES ENGINEER OFFICE
THIRD FLOOR, PARK SQUARE BUILDING
31 ST. JAMES AVENUE
BOSTON 16, MASS.



HEP:BN

27 August 1915

Aug 29 9 09 AM '15

Subject: Estimate - Channel from Buzzards Bay to Bittern Neck Bay, Mass.

To: The Chief of Engineers, Washington, D.C., through the Division Engineer, New England Division, Boston 16, Massachusetts.

1. There was submitted on August 11, 1915 an unfavorable preliminary examination report on a channel from Buzzards Bay to Bittern Neck Bay, Mass. to determine the improvement desired by the local interests and if a survey and further investigation were warranted.

2. The estimate given below indicates the approximate cost of dredging a channel to a depth of 7 feet at mean low water and a width of 100 feet through the bar above Sears Point. The quantity is based on place measurement with an allowance of 1 foot for overdepth dredging. The unit price includes engineering and contingencies.

Dredging the channel 25,500 cu. yds. @ .50 11,750

3. To make a hydrographic survey of the channel area would require a week and the survey and report would cost about \$1000.

4. There is enclosed in triplicate map entitled "Buzzards Bay, Mass., Channel to Bittern Neck Bay," File No. 1053 Dr. 72.

[Signature]
Colonel, Corps of Engineers
District Engineer

Inclosure:

Map, File No. 1053 Dr. 72 (in trip.)

Puzzards Bay, Mass. - File 1053, Dr. 72.

SUBJECT: Estimate - Channel from Buzzards Bay to Buttermilk Bay, Mass.

HEDGW
(27 Aug 45)

1st Ind.

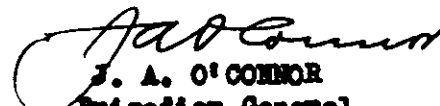
CAT/phw

Division Engineer, New England Division, Boston 10, Mass., 29 August 1945

TO: The Chief of Engineers, U. S. Army, Washington 25, D. C.
ATTENTION: SPENR

1. Forwarded in accordance with paragraph 279.4, Orders and Regulations.

2. The unfavorable preliminary examination report referred to in paragraph 1 of basic letter was concurred in by this office and forwarded to the Office, Chief of Engineers, by 1st Indorsement under date of 21 August 1945.


J. A. O'CONNOR
Brigadier General
Division Engineer

✓
1 Incl: n/c
(1 cy w/d)

10/1/45 J. A. O'Connor

cc: Boston D.O.

1 November 1945.
For meeting of 10 December 1945.

Subject: Channel from Buzzards Bay to Buttermilk Bay, Massachusetts

To: THE SECRETARY OF WAR

1. I submit for transmission to Congress my report with accompanying papers on preliminary examination of channel from Buzzards Bay to Buttermilk Bay, Massachusetts, authorized by the River and Harbor Act approved March 2, 1945.

2. Buzzards Bay, Massachusetts, is at the southern end of the Cape Cod Canal. It is connected with Buttermilk Bay by a natural channel branching from the Cape Cod Canal about 0.5 mile southwest of the Massachusetts State Pier on Bourne Neck, and extending northwesterly, past Butler Cove and through Cohasset Narrows for about 2 miles to Buttermilk Bay. At its narrowest point the channel is crossed by two bridges: a hand operated bascule railway bridge, which has never been opened and has a clearance of 6 feet at mean high water, and a fixed highway bridge with 9 feet of clearance at mean high water. Depths in Buttermilk Bay and Butler Cove range from 1 to 7 feet at mean low water. In the channel natural depths of 7 to 12 feet existed, but these have shoaled to 4 feet for a distance of about 0.25 mile between Sears Point and Bourne Neck. The mean range of tide is 4.0 feet.

3. Many summer residents have homes and cottages around Buttermilk Bay. The village of Buzzards Bay, located on the eastern shore, is a part of the town of Bourne, which had a population of 3,320 in 1940, with estates valued at \$9,435,900. Permanent residents of the area are supported by fishing and farming and by supplying the needs of the summer population. The town is on the New York, New Haven and Hartford Railroad and on the highway between Boston and Cape Cod. There are no commercial wharves or piers on the channel or on Buttermilk Bay, only small private piers for small craft. There is no commerce on the channel and no record of traffic making use of it. Present use is by small boats, such as skiffs, rowboats and small motorboats, for recreation and fishing.

4. Local interests desire the opening of a channel 100 feet wide and 7 feet deep at mean low water. They claim that years ago there was a natural channel which

Subject: Channel from Buzzards Bay to Buttermilk Bay, Massachusetts. - 2 -

maintained itself at a depth sufficient for the entrance of small coasting schooners. They attribute the existing shoaling to the enlarging of the Cape Cod Canal and claim that restoration of natural depths will attract new boats, increase taxable property, improve the bass fishing and enhance the value of real estate around Buttermilk Bay. They consider that no economic justification is necessary, since they seek no new development, only a restoration of former conditions. No specific offer of local cooperation has been made, nor is it believed that such cooperation will be forthcoming, since the attitude of local interests is that the damage was caused by the work of the United States on the Cape Cod Canal and that it should be remedied at Federal expense.

5. The district engineer finds that the only benefits to be expected from the improvement are greater ease and convenience of navigating the channel, and in its possible use by boats of slightly greater draft. These benefits are entirely local and cannot be evaluated. He states that the factors limiting the size of boats in use are the bridge clearances and the depths in Buttermilk Bay and Butler Cove, rather than the depths in the channel, and that the locality is not suitable for a harbor of refuge. He recommends that no survey be made of the channel from Buzzards Bay to Buttermilk Bay, Massachusetts.

6. The Board of Engineers for Rivers and Harbors, concurring in general with the district and division engineers, finds that improvement of the channel from Buzzards Bay to Buttermilk Bay is not justified at this time, and recommends that no survey be made.

7. After due consideration of these reports I concur in the views of the Board. The proposed improvement would serve only small-boat traffic and the benefits would be incommensurate with the cost. The locality is not suitable for a harbor of refuge for small boats. Therefore I report that improvement of the channel from Buzzards Bay to Buttermilk Bay, Massachusetts is not advisable at this time.

1 November 1945.
For meeting of 10 December 1945.

Subject: Channel from Buzzards Bay to Buttermilk Bay, Massachusetts.

___Ind.

The Board of Engineers for Rivers and Harbors, Washington, D. C., _____1945.

To: The Chief of Engineers, U. S. Army.

1. Local interests were advised of the adverse conclusions of the division engineer and were invited to submit additional data to the Board. At their request a hearing

(To be completed later.)

2. The Board concurs with the reporting officers that the proposed improvement is not justified at this time and recommends that no survey be made of the channel from Buzzards Bay to Buttermilk Bay, Massachusetts, at this time.

SUBJECT: Preliminary Examination of the Channel from Buzzards Bay to
Buttermilk Bay, Massachusetts

NEDGW
(4 Aug 45)

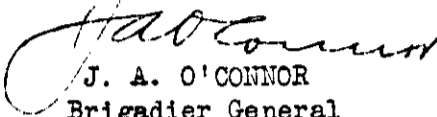
1st Ind.

CAT/mms

Division Engineer, New England Division, Boston 10, Mass., 21 August 1945

TO: The Chief of Engineers, U. S. Army, Washington 25, D. C.
ATTENTION: SPEWR

I concur in the unfavorable report of the District Engineer.


J. A. O'CONNOR
Brigadier General
Division Engineer

1 Incl.: n/c

PRELIMINARY EXAMINATION OF
CHANNEL FROM BUZZARDS BAY TO BUTTERMILK BAY
MASSACHUSETTS

- - - - -
Syllabus

The district engineer is of the opinion that the Channel from Buzzards Bay to Buttermilk Bay, Massachusetts, is not worthy of improvement by the Federal Government at the present time, and recommends that no survey be made.

War Department
United States Engineer Office
Boston 16, Massachusetts
4 August 1945

Subject: Preliminary Examination of the Channel from Buzzards Bay to Buttermilk Bay, Mass.

To: The Chief of Engineers, U. S. Army, through the Division Engineer, New England Division, Boston 10, Mass.

1. Authority.- This report is submitted in compliance with section 6 of the River and Harbor Act approved 2 March 1945 (Public Law No. 14 - 79th Congress) which reads in part as follows:

"Sec. 6. The Secretary of War is hereby authorized and directed to cause preliminary examinations and surveys to be made at the following-named localities, Channel from Buzzards Bay to Buttermilk Bay, Massachusetts".

2. Description.- The channel leading from Buzzards Bay to Buttermilk Bay, Massachusetts, is a natural channel branching from the Cape Cod Canal about one-half mile southwest of the Massachusetts State Pier and extending northerly past Butler Cove, for a distance of approximately 2 miles into Buttermilk Bay. This waterway is used chiefly by small pleasure boats and fishing parties during the summer months. The depths in Buttermilk Bay and Butler Cove range from 1 to 7 feet. The channel, with natural depths ranging from 7 to 12 feet, has shoaled for a distance of about one-quarter mile from just above Sears Point to

7. Terminal and transfer facilities.- There are no wharves bordering on the channel being considered in this report, and the only facilities in Buttermilk Bay are small private piers for shallow draft boats.

8. Improvement desired.- In order to afford local interests an opportunity to express their views with respect to the improvement of the channel from Buzzards Bay to Buttermilk Bay, a public hearing was held at Buzzards Bay on 2 June 1945. Among those in attendance at the hearing were a representative of the Massachusetts Department of Public Works, members of the Board of Selectmen of the Town of Bourne, local business men and private citizens of the community.

9. The improvement desired by local interests is the dredging of a channel about 100 feet wide and 7 feet deep at mean low water, through the sand bar which has extended into the old channel.

10. Proponents of the improvement stated that years ago a natural channel maintained itself with sufficient depth for small coasting schooners to navigate, but today there is only about 4 feet of water at mean low tide. This shoal condition prevents the larger boats from using this channel or from entering Buttermilk Bay and is claimed to have caused large losses to their bass fishing.

11. The opinion was expressed that a restoration of the channel to the dimensions stated would attract new boats, increase the taxable property in the town, and enhance the values of real estate around Buttermilk Bay, due to the facility of access to Buzzards Bay.

12. No specific offer of local cooperation was made at the hearing. Responsible parties stated that the shoaling was a direct result of the deepening and widening of the Cape Cod Canal, and therefore felt that the restoration of the channel to depths of 7 feet for a width of 100 feet was the responsibility of the Federal Government. One town official expressed the belief that unless the situation were remedied,

opposite Bourne Neck, the controlling depth being about 4.0 feet at mean low water.

3. The principal difficulty in navigating the channel is due to lack of water in the channel which is gradually shoaling in one area.

4. The mean range of tide is 4.0 feet and the spring range is 5.1 feet. The locality is shown on U.S. Coast & Geodetic Survey Chart No. 251, and on the map accompanying this report. No questions of water power, flood control, or other special subjects are involved. There have been no prior reports on the locality under consideration in this report, and no project for its improvement has ever been adopted.

5. Tributary area.- The village of Buzzards Bay, a part of the town of Bourne, is located on the east side of Buttermilk Bay. Summer residents of the town of Wareham have homes and cottages on the west side of the bay. In 1940 the town of Bourne had a population of 3,315, with estates valued at \$9,434,875, about one-third of which is estimated to be located in Buzzards Bay. The principal sources of revenue to the residents of the locality are fishing and farming, and the business incident to supplying the needs of summer residents and vacationists. The town is located on the New York, New Haven & Hartford Railroad and on the main highway between Boston and points on Cape Cod.

6. Bridges.- Two bridges cross the channel at Cohasset Narrows. One is a bascule type railroad bridge owned by the Old Colony Railroad (New York, New Haven & Hartford Railroad Co.) with a horizontal clearance of 25 feet and vertical clearances of 10 and 6 feet, at mean low and mean high water, respectively. The bascule span is hand powered and has never been in operation, the bridge being used only as a fixed bridge. The other is a fixed highway bridge owned by the Commonwealth of Massachusetts, with a horizontal clearance of 55.4 feet and vertical clearances of 13 and 9 feet at mean low and mean high water, respectively. Plans for both of these structures were approved by the War Department. The railroad bridge was completed in 1913 and the highway bridge in 1921.

the towns and state would be asked to do something to alleviate the condition. The representative of the Massachusetts Department of Public Works stated that he was authorized to say that his department would cooperate as much as possible in this improvement or restoration, if it did not interfere in any way with the highway bridge.

13. Commerce.-- There is no commerce on the waterway.

14. Vessel traffic.-- It was impossible to develop at the hearing any record of traffic now using the channel. Proponents stated that large numbers of small boats, such as skiffs and rowboats and small motorboats use the channel for pleasure and fishing during the summer months.

15. Discussion.-- All interests represented at the hearing were unanimous in their desire for the removal of shoals in the channel leading from Buzzards Bay to Buttermilk Bay to a depth of 7 feet at mean low water for a width of 100 feet. Their opinion is that the shoaling which has occurred during the past 10 years is caused by the widening and deepening of the Cape Cod Canal by the Federal Government and that it is the responsibility of the Government to restore it to its former condition, to be used for whatever purpose is desired. This is based on the fact that the natural channel had always maintained itself prior to the Cape Cod Canal construction operations. They made no attempt to justify it economically on either commercial or pleasure boat grounds, merely stating that it was a channel of usable dimensions and one of the things that attracted people to the surrounding communities.

16. The fixed bridges at Cohasset Narrows have low vertical clearances which prevent anything but small boats from passing through them into Buttermilk Bay. This condition has obtained for many years. During the summer about 60 rowboats or skiffs and about 30 small motorboats use the channel and bay. These have drafts of 1 to 3 feet.

17. The shallow depths of water in Butler Cove and Buttermilk Bay and the low clearance of the bridges are the controlling factors

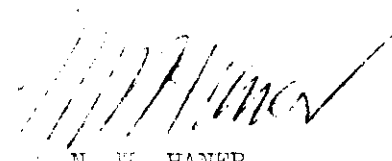
in the size and type of boats in use, and not the depths in the channel. A channel with a depth of 7 feet would permit the use of larger and deeper draft boats than are now in use, if the other conditions did not restrict them.

18. The locality is not suitable for a harbor of refuge for small boats and is not needed as such with Onset Harbor in the immediate vicinity.

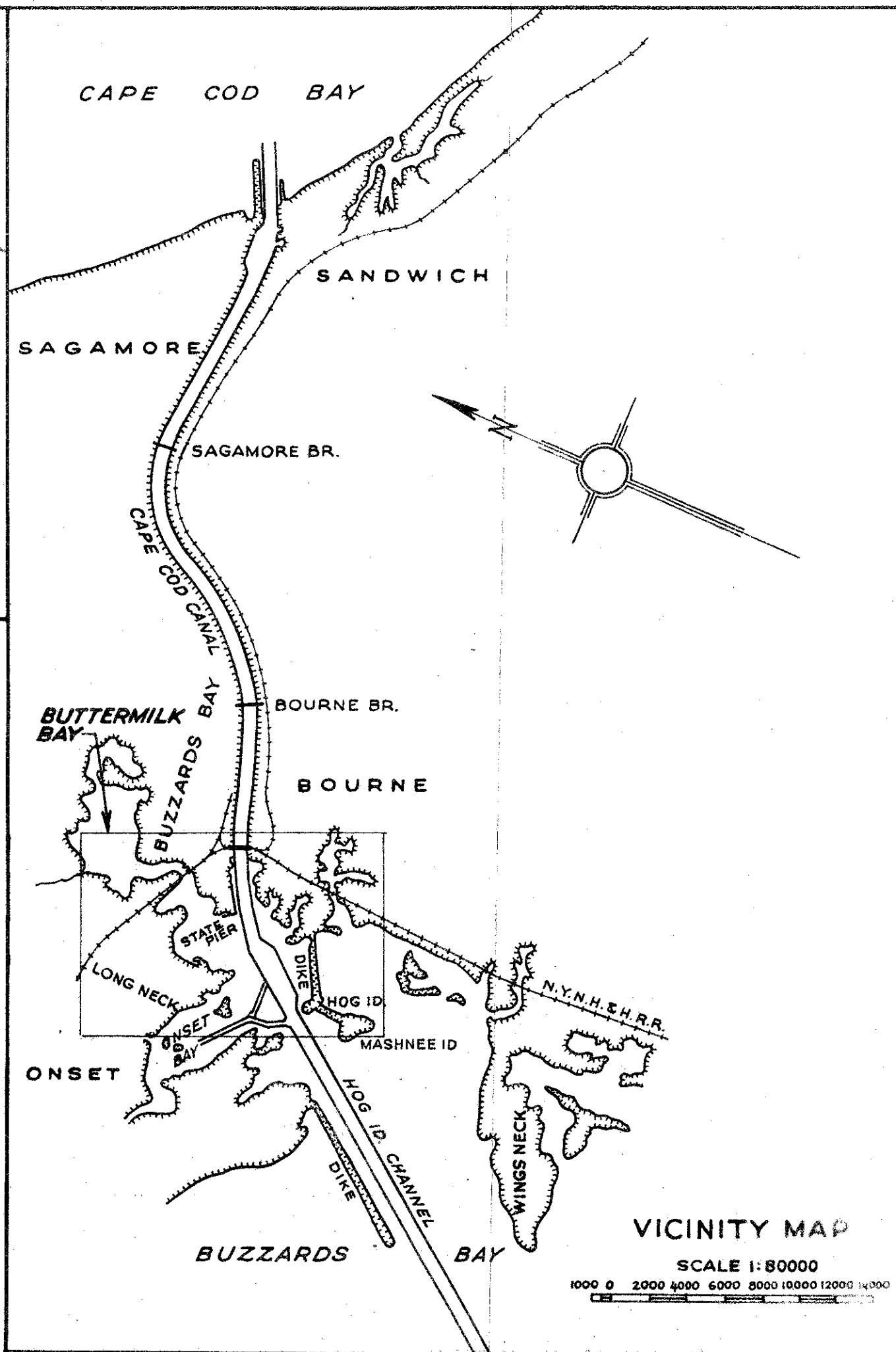
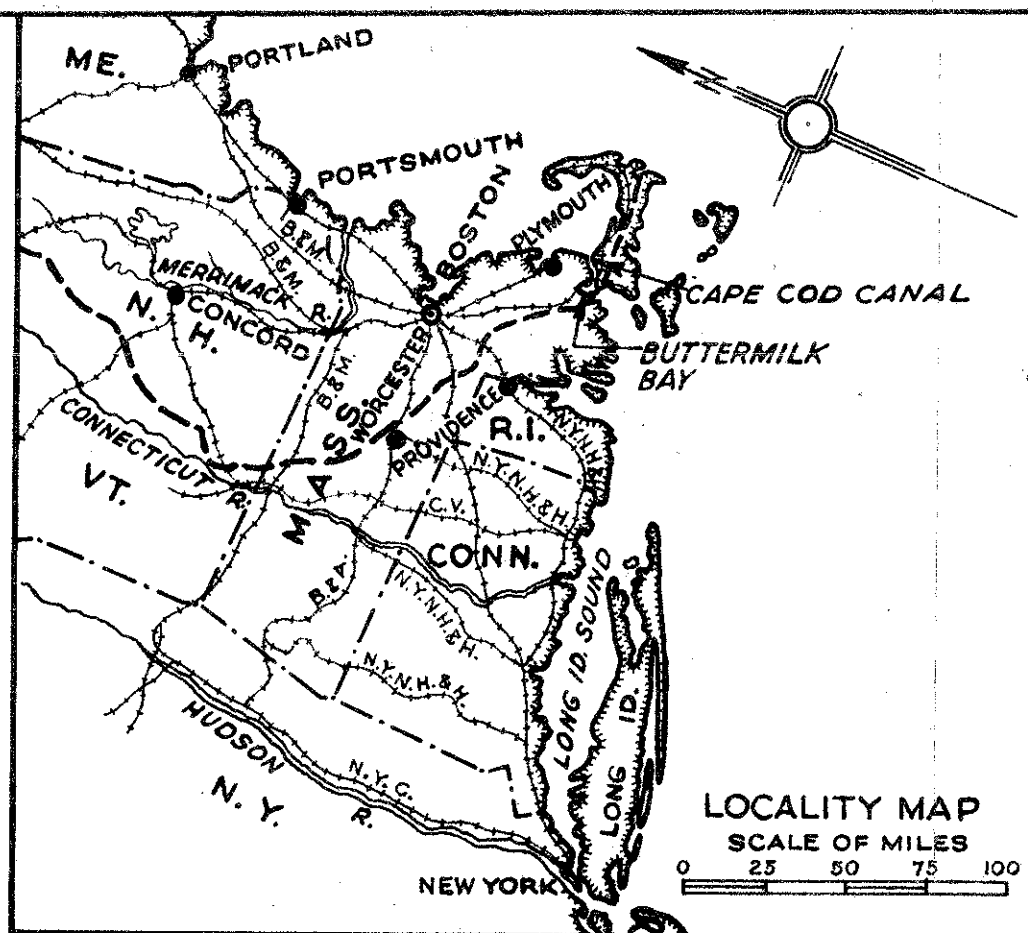
19. The benefits which would result from the improvement are only the greater ease and convenience with which the entrance channel could be navigated at low tide and the possible use of boats with slightly greater draft. These benefits are not susceptible of evaluation and are entirely local in character. No local cooperation in a Federal project could be expected from the town interests, as they are of the opinion that the United States should restore the channel at its own expense.

20. Conclusion.- In view of the foregoing, the district engineer concludes that improvement of the entrance channel from Buzzards Bay to Buttermilk Bay is not warranted at the present time.

21. Recommendation.- The district engineer recommends that no survey be made of the channel from Buzzards Bay to Buttermilk Bay, Massachusetts.


N. W. HANER,
Lt. Col., Corps of Engineers,
Acting District Engineer.

Inclosure:
Map



LEGEND

- MEAN HIGH WATER LINE
- MEAN LOW WATER LINE
- 4-FT. CURVE OF DEPTH
- 7-FT. CURVE OF DEPTH

NOTE: DEPTHS EXPRESSED IN FEET AND TENTHS ARE TAKEN FROM LATEST SURVEYS OF AREAS IN WHICH THEY APPEAR. ALL OTHER DEPTHS ARE TAKEN FROM AN ENLARGEMENT OF U.S.C. & G.S. CHART NO. 251. DEPTHS ARE REFERRED TO THE PLANE OF MEAN LOW WATER AS INDICATED BY THE BENCH MARK. BENCH MARK: A COPPER BOLT IN THE CONCRETE ON THE WEST END OF THE NORTH PLATFORM OF THE STATE PIER. ELEVATION 11.70 FEET ABOVE MEAN LOW WATER. SOUNDINGS SHOWN IN FEET AND TENTHS WERE TAKEN MAY, JULY, 1945.

BUZZARDS BAY, MASS.
CHANNEL TO
BUTTERMILK BAY

SCALE OF FEET
100 0 500 1000 1500 2000 FT.

U. S. ENGINEER OFFICE, BOSTON, MASS. 22 JUNE 1945

APPROVAL RECOMMENDED: *John E. Allen* APPROVED: *W. H. Hance*

SUBMITTED: *W. H. Hance* TO ACCOMPANY REPORT DATED 4 AUGUST 1945

FILE NO 1053 DR 72